

REMARKS

In the Office Action, the Examiner rejected claims 1-19 and 24-25 under 35 U.S.C. §103(a) as being unpatentable over the United States Patent 6,587,990 issued to Andreev, et al. (“Andreev”) in view of Mano, et al. (“Mano”). The Examiner also rejected claims 20-23 under 35 U.S.C. §103(a) as being unpatentable over Andreev in view of Mano, further in view of the United States Patent 6,134,705 issued to Pedersen, et al. (“Pedersen”).

In this Amendment, Applicants have amended claims 1-2 and 12. Applicants have amended claims 1-2 and 12 for reasons of clarity and not for reasons of patentability. Applicants do not surrender any equivalents of any amended limitations. Therefore, claims 1-25 remain pending in this application.

I. Rejection of Claim 1 under §103(a)

In the Office Action, the Examiner rejected claim 1 under §103(a) as being unpatentable by Andreev in view of Mano. Claim 1 recites a computer-readable medium encoded with a data storage structure that stores several combinational-logic sub-networks. Each sub-network performs a set of output functions and includes a set of circuit elements. At least some of the sub-networks include a first circuit that has a first output outside the sub-network and a second circuit that has a second output outside the sub-network. The first circuit receives a direct or indirect input from the second circuit. Each sub-network is stored based on a set of indices derived from the set of output functions performed by the sub-network. The set of indices is used to retrieve the sub-network from the data storage structure.

For at least the following reasons, Applicants respectfully submit that Andreev and Mano do not disclose, teach, or even suggest the method of claim 1, either alone or through their piecemeal hindsight combination. *First*, Andreev and Mano do not disclose, teach, or even

suggest a data storage structure that stores each sub-network based on a set of indices derived from the set of output functions performed by the sub-network. In the Office Action, the Examiner only cites Mano to suggest a sub-network that performs a set of output functions. However, the Examiner cites column 13, lines 60-65 of Andreev to suggest storing sub-networks based on a set of indices derived from a set of output functions performed by the sub-network.

Applicants respectfully submit that the cited lines do not disclose the storing of sub-networks based on indices derived from output functions, but rather specify how Computer Aided Design (CAD) tools and computer automation have assisted in improving chip design. Therefore, Applicants respectfully submit that the Examiner has failed to identify how the cited lines store sub-networks based on a set of indices derived from the set of output functions performed by the sub-network.

Furthermore, the Examiner cites column 1, lines 16-18 and 36-42, column 10, lines 53-64 and column 6, lines 33-39 of Andreev for the proposition that Andreev discloses a data storage structure that stores various sub-networks that perform output functions. However, the cited lines omit how the sub-networks are stored within the alleged data storage structure. Specifically, the cited lines do not disclose storing a sub-network based on a set of indices generated from the output of the functions. Moreover, the circuit sheaf of Andreev, proposed as the data storage structure, is a moniker to an abstract and generic storage vehicle and therefore is unrelated to the data storage structure stored on a computer-readable medium of claim 1.

Second, Applicants respectfully submit that the Examiner's rejection has relied on impermissible piecemeal hindsight combination of features from Andreev and Mano. "Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge

generally available to one of ordinary skill in the art.” *See*, MPEP §2143.01. Applicants respectfully submit that the Examiner has not identified any suggestions or motivations, explicit or implicit, for establishing the combination of the Andreev and Mano references.

In view of the foregoing remarks, Applicants respectfully submit that the cited references do not render claim 1 invalid. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of claim 1.

II. Rejection of Claims 2-11 and 25 under §103(a)

In the Office Action, the Examiner rejected claims 2-11 and 25 under §103(a) as being unpatentable by Andreev in view of Mano. Claims 3-11 and 25 are directly or indirectly dependent on claim 2. Claim 2 recites a computer-readable medium encoded with a data storage structure that stores several combinational-logic sub-networks. Each sub-network performs a set of output functions and includes a set of circuit elements. At least some of the sub-networks include a first circuit that has a first output outside the sub-network and a second circuit that has a second output outside the sub-network. The first circuit receives a direct or indirect input from the second circuit. The data storage structure stores each sub-network based on a parameter derived from the set of output functions of the sub-network. The parameter is used to retrieve the sub-network from the data storage structure.

For at least the following reasons, Applicants respectfully submit that Andreev and Mano do not disclose, teach, or even suggest the method of claim 2, either alone or through their piecemeal hindsight combination. *First*, as argued above with regards to claim 1, Andreev and Mano do not disclose, teach, or even suggest a data storage structure that stores each sub-network based on a set of indices derived from the set of output functions performed by the sub-network.

Second, Applicants respectfully submit that the Examiner's rejection has relied on impermissible piecemeal hindsight combination of features from Andreev and Mano as discussed above with regards to claim 1. Applicants respectfully submit that the Examiner has not identified any suggestions or motivations, explicit or implicit, for establishing the combination of the Andreev and Mano references.

In view of the foregoing remarks, Applicants respectfully submit that the cited references do not render claim 2 invalid. Given that claims 3-11 and 25 are dependent on claim 2, Applicants respectfully submit that these claims be allowable over the cited reference for at least the same reasons that were provided above for claim 2. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 2-11 and 25.

IV. Rejection of Claims 12-24 under §103(a)

In the Office Action, the Examiner rejected claims 12-24 under §103(a) as being unpatentable by Andreev in view of Mano. Claims 13-24 are directly or indirectly dependent on claim 12. Claim 12 recites a computer-readable medium that stores a computer program for processing a sub-network record management system that includes a computer-readable medium encoded with a data storage structure that stores a plurality of combinational-logic sub-networks. Each sub-network performs a set of output functions and includes a set of circuit elements. At least some of the sub-networks include a first circuit that has a first output outside the sub-network and a second circuit that has a second output outside the sub-network. The first circuit receives a direct or indirect input from the second circuit. The data storage structure stores each sub-network based on a parameter derived from the set of output functions of the sub-network. The parameter is used to retrieve the sub-network from the data storage structure. The sub-

network record management system also includes a data access manager that identifies and retrieves sub-networks from the data storage structure.

For at least the following reasons, Applicants respectfully submit that Andreev and Mano do not disclose, teach, or even suggest the method of claim 12, either alone or through their piecemeal hindsight combination. *First*, Andreev and Mano do not disclose, teach, or even suggest a data access manager that identifies and retrieves sub-networks from the data storage structure. In the Office Action, the Examiner cites column 4, lines 17-30 of Andreev to suggest such a limitation. However, the cited lines disclose an example of a combinational circuit and the basic logic gates used to create the combinational circuit. Applicants respectfully submit that such limitations are wholly absent from any of the cited lines and that the limitations are not disclosed elsewhere within the Andreev and/or Mano references.

Second, as discussed above with regards to claim 1, Applicants respectfully submit that the piecemeal hindsight combination of Andreev and Mano does not disclose, teach, or even suggest a data storage structure that stores each sub-network based on a parameter derived from the set of output functions performed by the sub-network.

Third, Applicants respectfully submit that the Examiner's rejection has relied on impermissible piecemeal hindsight combination of features from Andreev and Mano as discussed above with regards to claim 1. Applicants respectfully submit that the Examiner has not identified any suggestions or motivations, explicit or implicit, for establishing the combination of the Andreev and Mano references.

In view of the foregoing remarks, Applicants respectfully submit that the cited references do not render claim 12 invalid. Given that claims 13-24 are dependent on claim 12, Applicants respectfully submit that these claims be allowable over the cited reference for at least the same

reasons that were provided above for claim 12. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 12-24.

CONCLUSION

In view of the foregoing, it is submitted that all pending claims, namely claims 1-25, are in condition for allowance. Reconsideration of the rejections and objections is requested. Allowance is earnestly solicited at the earliest possible date.

Respectfully submitted,

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